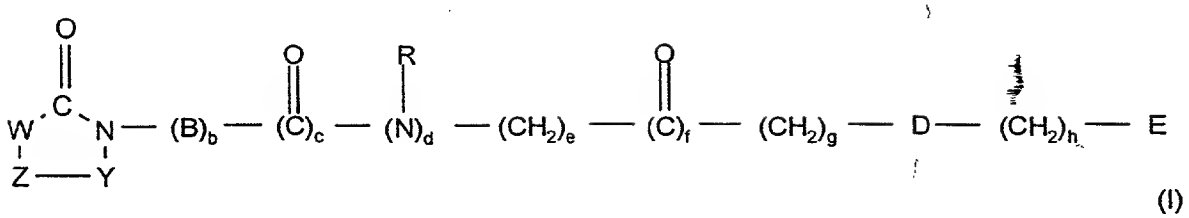
What is claimed is:

1. A compound of the formula I



(I)

in which

W is R^1-A-C(R^{13}) or R^1-A-CH=C;

Y is a carbonyl, thiocarbonyl or methylene group;

Z is N(R^0), oxygen, sulfur or a methylene group;

A is a bivalent radical from the group consisting of (C_1-C_6)-alkylene, (C_3-C_{12})-cycloalkylene, (C_1-C_6)-alkylene-(C_3-C_{12})-cycloalkyl, phenylene, phenylene-(C_1-C_6)-alkyl, (C_1-C_6)-alkylenephenyl, (C_1-C_6)-alkylenephenyl-(C_1-C_6)-alkyl, phenylene-(C_2-C_6)-alkenyl or a bivalent radical of a 5- or 6-membered saturated or unsaturated ring which can contain 1 or 2 nitrogen atoms and can be mono- or disubstituted by (C_1-C_6)-alkyl or doubly bonded oxygen or sulfur, or is a direct bond;

B is a bivalent radical from the group consisting of (C_1-C_6)-alkylene, (C_2-C_6)-alkenylene, phenylene, phenylene-(C_1-C_3)-alkyl, (C_1-C_3)-alkylenephenyl, where the bivalent (C_1-C_6)-alkylene radical can be unsubstituted or substituted by a radical from the group consisting of (C_1-C_8)-alkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, (C_3-C_{10})-cycloalkyl, (C_3-C_{10})-cycloalkyl-(C_1-C_6)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_6)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl and heteroaryl-(C_1-C_6)-alkyl optionally substituted in the heteroaryl radical;

D is C(R^2)(R^3), N(R^3) or CH=C(R^3);

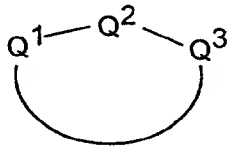
E is tetrazolyl, (R^8O)$_2$P(O), HOS(O)$_2$, R^9NHS(O)$_2$ or R^{10}CO;

R is hydrogen, (C_1-C_8)-alkyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl and heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical, where alkyl radicals can be mono- or polysubstituted by fluorine;

R^0 is hydrogen, (C_1-C_8)-alkyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, (C_6-C_{12})-bicycloalkyl, (C_6-C_{12})-bicycloalkyl-(C_1-C_8)-alkyl, (C_6-C_{12})-tricycloalkyl, (C_6-C_{12})-tricycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl, heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical, CHO, (C_1-C_8)-alkyl-CO, (C_3-C_{12})-cycloalkyl-CO, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl-CO, (C_6-C_{12})-bicycloalkyl-CO, (C_6-C_{12})-bicycloalkyl-(C_1-C_8)-alkyl-CO, (C_6-C_{12})-tricycloalkyl-CO,

$(C_6$-$C_{12})$-tricycloalkyl-$(C_1$-$C_8)$-alkyl-CO, optionally substituted $(C_6$-$C_{14})$-aryl-CO, $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl-CO optionally substituted in the aryl radical, optionally substituted heteroaryl-CO, heteroaryl-$(C_1$-$C_8)$-alkyl-CO optionally substituted in the heteroaryl radical, $(C_1$-$C_8)$-alkyl-$S(O)_n$, $(C_3$-$C_{12})$-cycloalkyl-$S(O)_n$, $(C_3$-$C_{12})$-cycloalkyl-$(C_1$-$C_8)$-alkyl-$S(O)_n$, $(C_6$-$C_{12})$-bicycloalkyl-$S(O)_n$, $(C_6$-$C_{12})$-bicycloalkyl-$(C_1$-$C_8)$-alkyl-$S(O)_n$, $(C_6$-$C_{12})$-tricycloalkyl-$S(O)_n$, $(C_6$-$C_{12})$-tricycloalkyl-$(C_1$-$C_8)$-alkyl-$S(O)_n$, optionally substituted $(C_6$-$C_{14})$-aryl-$S(O)_n$, $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl-$S(O)_n$ optionally substituted in the aryl radical, optionally substituted heteroaryl-$S(O)_n$ or heteroaryl-$(C_1$-$C_8)$-alkyl-$S(O)_n$ optionally substituted in the heteroaryl radical, where n is 1 or 2;

R^1 is one of the radicals $-S-R^{21}$, $-S-S-R^{21}$, $-S(O)-R^{22}$, $-S(O)_2-R^{22}$, $-S-OR^{21}$, $-S(O)-OR^{21}$, $-S(O)_2-OR^{21}$, $-S-N(R^{21})-R^{28}$, $-S(O)-N(R^{21})-R^{28}$, $-S(O)_2-N(R^{21})-R^{28}$, $-S-C(O)-R^{21}$, $-S-C(O)-OR^{22}$, $-S-C(S)-SR^{22}$, $-S-C(O)-N(R^{21})-R^{28}$, $-S-C(S)-N(R^{21})-R^{28}$, $-O-C(O)-R^{21}$, $-O-C(S)-R^{21}$, $-O-C(O)-OR^{22}$, $-O-C(O)-N(R^{21})-R^{28}$, $-O-C(S)-N(R^{21})-R^{28}$, $-O-S(O)_2-OR^{21}$, $-O-S(O)-OR^{21}$, $-O-S(O)_2-N(R^{21})-R^{28}$, $-O-S(O)-N(R^{21})-R^{28}$, $-O-S(O)_2-R^{22}$, $-O-S(O)-R^{22}$, $-O-P(O)(OR^{21})_2$, $-O-P(O)(OR^{21})-N(R^{21})-R^{28}$, $-O-P(O)(N(R^{21})-R^{28})_2$, $-N(R^{29})-C(O)-OR^{22}$, $-N(R^{28})-C(O)-SR^{22}$, $-N(R^{28})-C(S)-OR^{22}$, $-N(R^{28})-C(S)-SR^{22}$, $-N(R^{28})-C(S)-R^{21}$, $-N(R^{28})-C(O)-N(R^{21})-R^{28}$, $-N(R^{28})-C(S)-N(R^{21})-R^{28}$, $-N(R^{28})-S(O)_2-R^{22}$, $-N(R^{28})-S(O)-R^{22}$, $-N(R^{28})-S(O)_2-OR^{21}$, $-N(R^{28})-S(O)-OR^{21}$, $-N(R^{28})-S(O)_2-N(R^{21})-R^{28}$, $-N(R^{28})-S(O)-N(R^{21})-R^{28}$, $-N(R^{28})-P(O)(OR^{21})_2$, $-N(R^{28})-P(O)(OR^{21})-N(R^{21})-R^{28}$, $-N(R^{28})-P(O)(N(R^{21})-R^{28})_2$, $-N(R^{28})-P(O)(R^{22})-OR^{21}$, $-N(R^{28})-P(O)(R^{22})-N(R^{21})-R^{28}$, $-N(R^{28})-P(O)(R^{22})_2$, $-P(O)(OR^{21})_2$, $-P(O)(OR^{21})-N(R^{21})-R^{28}$, $-P(O)(N(R^{21})-R^{28})_2$, $-P(O)(R^{22})-OR^{21}$, $-P(O)(R^{22})-N(R^{21})-R^{28}$, $-P(O)(R^{22})_2$, $-C(S)-R^{21}$, $-C(S)-SR^{21}$, $-C(S)-N(R^{21})-R^{28}$, cyano, halogen, nitro or methylenedioxy or the radical of an optionally substituted, 5- to 14-membered, mono- or polycyclic, saturated or unsaturated heterocyclic ring of the formula



in which

Q^1 is $-C(R^{21})_2-$, $=C(R^{21})-$, $-N(R^{28})-$, $-O-$ or $-S-$;

Q^2 is $-S(O)-$ or $-S(O)_2-$;

Q^3 is $-C(R^{21})_2-$, $=C(R^{21})-$, $-N(R^{28})-$, $-O-$, $-S-$, $-C(R^{21})(-)-$ or $-N(-)-$,

where the heterocyclic ring can be bonded to the group A via the free bond in the groups $-C(R^{21})(-)-$ or $-N(-)-$ representing Q^3 or via any other desired ring carbon atom and where, if the heterocyclic ring is bonded to a ring system contained in the group A,

the heterocyclic ring can also be fused via two adjacent atoms to the ring system in the group A;

R^2 is hydrogen, (C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical or (C_3-C_8)-cycloalkyl;

R^3 is hydrogen, (C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, (C_3-C_8)-cycloalkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, (C_2-C_8)-alkenylcarbonyl, (C_2-C_8)-alkynylcarbonyl, pyridyl, $R^{11}NH$, R^4CO, $COOR^4$, $CON(CH_3)R^4$, $CONHR^4$, $CSNHR^4$, $COOR^{15}$, $CON(CH_3)R^{15}$ or $CONHR^{15}$;

R^4 is hydrogen or (C_1-C_{28})-alkyl which can optionally be mono- or polysubstituted by identical or different radicals from the group consisting of hydroxyl, hydroxycarbonyl, aminocarbonyl, mono- or di-$((C_1-C_{18})$-alkyl)aminocarbonyl, amino-(C_2-C_{18})-alkylaminocarbonyl, amino-(C_1-C_3)-alkylphenyl-(C_1-C_3)-alkylaminocarbonyl, (C_1-C_{18})-alkylcarbonylamino-(C_1-C_3)-alkylphenyl-(C_1-C_3)-alkylaminocarbonyl, (C_1-C_{18})-alkylcarbonylamino-(C_2-C_{18})-alkylaminocarbonyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkoxycarbonyl which can also be substituted in the aryl radical, amino, mercapto, (C_1-C_{18})-alkoxy, (C_1-C_{18})-alkoxycarbonyl, Het-CO, optionally substituted (C_3-C_8)-cycloalkyl, $HOS(O)_2$-(C_1-C_3)-alkyl, $R^9NHS(O)_2$-(C_1-C_3)-alkyl, $(R^8O)_2P(O)$-(C_1-C_3)-alkyl, tetrazolyl-(C_1-C_3)-alkyl, halogen, nitro, trifluoromethyl or the radical R^5;

R^5 is optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, a mono- or bicyclic 5- to 12-membered heterocyclic ring which can be aromatic, partially hydrogenated or completely hydrogenated and which can contain one, two or three identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur, a radical R^6 or a radical R^6CO-, where the aryl radical and, independently thereof, the heterocyclic radical can be mono- or polysubstituted by identical or different radicals from the group consisting of (C_1-C_{18})-alkyl, (C_1-C_{18})-alkoxy, halogen, nitro, amino and trifluoromethyl;

R^6 is R^7R^8N, R^7O or R^7S or an amino acid side chain, a natural or unnatural amino acid, imino acid, optionally N-(C_1-C_8)-alkylated or N-$((C_6-C_{14})$-aryl-(C_1-C_8)-alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or reduced in the peptide bond to -NH-CH_2-, and their esters and amides, where hydrogen or hydroxymethyl can optionally stand in place of of free functional groups and/or where free functional groups can be protected by protective groups customary in peptide chemistry;

R^7 is hydrogen, (C_1-C_{18})-alkyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl, (C_1-C_{18})-alkylcarbonyl, (C_1-C_{18})-alkoxycarbonyl, (C_6-C_{14})-arylcarbonyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkylcarbonyl or (C_6-C_{14})-aryl-(C_1-C_{18})-alkyloxycarbonyl, where the alkyl groups can optionally be substituted by an amino group and/or where the aryl radicals can be mono- or polysubstituted by identical or different radicals from the group consisting of (C_1-C_8)-alkyl, (C_1-C_8)-alkoxy, halogen, nitro, amino and trifluoromethyl, or is a natural or unnatural amino acid, imino acid, optionally N-(C_1-C_8)-alkylated or N-$((C_6-C_{14})$-aryl-(C_1-C_8)-alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or reduced in the peptide bond to -NH-CH_2-;

R^8 is hydrogen, (C_1-C_{18})-alkyl, optionally substituted (C_6-C_{14})-aryl or (C_6-C_{14})-aryl-(C_1-C_8)-alkyl which can also be substituted in the aryl radical;

R^9 is hydrogen, aminocarbonyl, (C_1-C_{18})-alkylaminocarbonyl, (C_3-C_8)-cycloalkylaminocarbonyl, optionally substituted (C_6-C_{14})-arylaminocarbonyl, (C_1-C_{18})-alkyl, optionally substituted (C_6-C_{14})-aryl or (C_3-C_8)-cycloalkyl;

R^{10} is hydroxyl, (C_1-C_{18})-alkoxy, (C_6-C_{14})-aryl-(C_1-C_8)-alkoxy which can also be substituted in the aryl radical, optionally substituted (C_6-C_{14})-aryloxy, amino or mono- or di-$((C_1-C_{18})$-alkyl)amino;

R^{11} is hydrogen, R^{12a}, R^{12a}-CO, H-CO, R^{12a}-O-CO, R^{12b}-CO, R^{12b}-CS, R^{12a}-$S(O)_2$ or R^{12b}-$S(O)_2$;

R^{12a} is (C_1-C_{18})-alkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl, heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical or the radical R^{15};

R^{12b} is amino, di-$((C_1-C_{18})$-alkyl)amino or R^{12a}-NH;

R^{13} is hydrogen, (C_1-C_6)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, (C_3-C_8)-cycloalkyl or (C_3-C_8)-cycloalkyl-(C_1-C_8)-alkyl;

R^{15} is R^{16}-(C_1-C_6)-alkyl or R^{16};

R^{16} is a 6- to 24-membered bicyclic or tricyclic radical which is saturated or partially unsaturated and which can also contain one, two, three or four identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur and which can also be substituted by one or more identical or different substituents from the group consisting of (C_1-C_4)-alkyl and oxo;

R^{21} is hydrogen, (C_1-C_8)-alkyl, hydroxy-(C_1-C_8)-alkyl, (C_2-C_8)-alkenyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl or heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical, where alkyl radicals can also be monosubstituted or polysubstituted by fluorine and the radicals R^{21} can be identical or different if they occur two or more times;

R^{22} is (C_1-C_8)-alkyl, hydroxy-(C_1-C_8)-alkyl, (C_2-C_8)-alkenyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl or heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical, where alkyl radicals can be monosubstituted or polysubstituted by fluorine and the radicals R^{22} can be identical or different if they occur two or more times;

R^{28} is one of the radicals R^{21}-, $R^{21}N(R^{21})$-, $R^{21}C(O)$-, $R^{22}O$-C(O)-, $R^{21}N(R^{21})$-C(O)- or $R^{21}N(R^{21})-C(=N(R^{21}))-$;

R^{29} is one of the radicals R^{22}-, $R^{21}N(R^{21})$-, $R^{21}C(O)$-, $R^{22}O$-C(O)-, $R^{21}N(R^{21})$-C(O)- or $R^{21}N(R^{21})-C(=N(R^{21}))-$;

Het is the radical of a 5- to 10-membered, monocyclic or polycyclic heterocycle bonded via

a nitrogen atom, which can be aromatic or partially unsaturated or saturated and which can contain one, two, three or four identical or different additional ring heteroatoms from the group consisting of oxygen, nitrogen and sulfur and which can be optionally substituted on carbon atoms and on additional ring nitrogen atoms, where there can be identical or different radicals R^h, R^hCO or R^hO-CO as substituents on additional ring nitrogen atoms and R^h is hydrogen, $(C_1$-$C_8)$-alkyl, $(C_3$-$C_8)$-cycloalkyl, $(C_3$-$C_8)$-cycloalkyl-$(C_1$-$C_8)$-alkyl, optionally substituted $(C_6$-$C_{14})$-aryl or $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl optionally substituted in the aryl radical;

b, c, d and f independently of one another are 0 or 1, but cannot all simultaneously be 0;

e, g and h independently of one another are 0, 1, 2, 3, 4, 5 or 6;

in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts;

where, however, if simultaneously W is 4-cyanophenyl-$C(R^{13})$, Y is a carbonyl group, Z is NR^{0a}, B is an unsubstituted methylene group, R is R^a, b, c and d are 1 and e, f and g are 0, then D cannot be $C(R^{2a})(R^{3a})$, where

R^{0a}, R^a and R^{2a} independently of one another are hydrogen, $(C_1$-$C_8)$-alkyl, optionally substituted $(C_6$-$C_{14})$-aryl, $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl optionally substituted in the aryl radical or $(C_3$-$C_8)$-cycloalkyl and

R^{3a} is hydrogen, $(C_1$-$C_8)$-alkyl, optionally substituted $(C_6$-$C_{14})$-aryl, $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl optionally substituted in the aryl radical, $(C_3$-$C_8)$-cycloalkyl or 2-, 3- or 4-pyridyl.

2. A compound of the formula I as claimed in claim 1, in which

W is R^1-A-$C(R^{13})$ or R^1-A-CH=C;

Y is a carbonyl, thiocarbonyl or methylene group;

Z is $N(R^0)$, oxygen, sulfur or a methylene group;

A is a bivalent radical from the group consisting of $(C_1$-$C_6)$-alkylene, $(C_3$-$C_{12})$-cycloalkylene, $(C_1$-$C_6)$-alkylene-$(C_3$-$C_{12})$-cycloalkyl, phenylene, phenylene-$(C_1$-$C_6)$-alkyl, $(C_1$-$C_6)$-alkylenephenyl, $(C_1$-$C_6)$-alkylenephenyl-$(C_1$-$C_6)$-alkyl, phenylene-$(C_2$-$C_6)$-alkenyl or a bivalent radical of a 5- or 6-membered saturated or unsaturated ring which can contain 1 or 2 nitrogen atoms and can be mono- or disubstituted by $(C_1$-$C_6)$-alkyl or doubly bonded oxygen or sulfur, or is a direct bond;

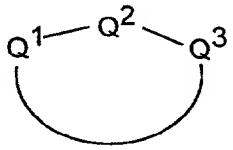
B is a bivalent radical from the group consisting of $(C_1$-$C_6)$-alkylene, $(C_2$-$C_6)$-alkenylene, phenylene, phenylene-$(C_1$-$C_3)$-alkyl, $(C_1$-$C_3)$-alkylenephenyl;

D is $C(R^2)(R^3)$, $N(R^3)$ or $CH=C(R^3)$;

E is tetrazolyl, $(R^8O)_2P(O)$, $HOS(O)_2$, $R^9NHS(O)_2$ or $R^{10}CO$;

R and R^0 independently of one another are hydrogen, $(C_1$-$C_8)$-alkyl, $(C_3$-$C_{12})$-cycloalkyl, $(C_3$-$C_{12})$-cycloalkyl-$(C_1$-$C_8)$-alkyl, optionally substituted $(C_6$-$C_{14})$-aryl, $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl or heteroaryl-$(C_1$-$C_8)$-alkyl optionally substituted in the heteroaryl radical, where alkyl radicals can be mono- or polysubstituted by fluorine;

R^1 is one of the radicals -S-R^{21}, -S-S-R^{21}, -S(O)-R^{22}, -S(O)$_2$-R^{22}, -S-OR^{21}, -S(O)-OR^{21}, -S(O)$_2$-OR^{21}, -S-N(R^{21})-R^{28}, -S(O)-N(R^{21})-R^{28}, -S(O)$_2$-N(R^{21})-R^{28}, -S-C(O)-R^{21}, -S-C(O)-OR^{22}, -S-C(S)-SR^{22}, -S-C(O)-N(R^{21})-R^{28}, -S-C(S)-N(R^{21})-R^{28}, -O-C(O)-R^{21}, -O-C(S)-R^{21}, -O-C(O)-OR^{22}, -O-C(O)-N(R^{21})-R^{28}, -O-C(S)-N(R^{21})-R^{28}, -O-S(O)$_2$-OR^{21}, -O-S(O)-OR^{21}, -O-S(O)$_2$-N(R^{21})-R^{28}, -O-S(O)-N(R^{21})-R^{28}, -O-S(O)$_2$-R^{22}, -O-S(O)-R^{22}, -O-P(O)(OR^{21})$_2$, -O-P(O)(OR^{21})-N(R^{21})-R^{28}, -O-P(O)(N(R^{21})-R^{28})$_2$, -N(R^{29})-C(O)-OR^{22}, -N(R^{28})-C(O)-SR^{22}, -N(R^{28})-C(S)-OR^{22}, -N(R^{28})-C(S)-SR^{22}, -N(R^{28})-C(S)-R^{21}, -N(R^{28})-C(O)-N(R^{21})-R^{28}, -N(R^{28})-C(S)-N(R^{21})-R^{28}, -N(R^{28})-S(O)$_2$-R^{22}, -N(R^{28})-S(O)-R^{22}, -N(R^{28})-S(O)$_2$-OR^{21}, -N(R^{28})-S(O)-OR^{21}, -N(R^{28})-S(O)$_2$-N(R^{21})-R^{28}, -N(R^{28})-S(O)-N(R^{21})-R^{28}, -N(R^{28})-P(O)(OR^{21})$_2$, -N(R^{28})-P(O)(OR^{21})-N(R^{21})-R^{28}, -N(R^{28})-P(O)(N(R^{21})-R^{28})$_2$, -N(R^{28})-P(O)(R^{22})-OR^{21}, -N(R^{28})-P(O)(R^{22})-N(R^{21})-R^{28}, -N(R^{28})-P(O)(R^{22})$_2$, -P(O)(OR^{21})$_2$, -P(O)(OR^{21})-N(R^{21})-R^{28}, -P(O)(N(R^{21})-R^{28})$_2$, -P(O)(R^{22})-OR^{21}, -P(O)(R^{22})-N(R^{21})-R^{28}, -P(O)(R^{22})$_2$, -C(S)-R^{21}, -C(S)-SR^{21}, -C(S)-N(R^{21})-R^{28}, cyano, halogen, nitro or methylenedioxy or the radical of an optionally substituted, 5- to 14-membered, mono- or polycyclic, saturated or unsaturated heterocyclic ring of the formula



in which

Q^1 is -C(R^{21})$_2$-, =C(R^{21})-, -N(R^{28})-, -O- or -S-;

Q^2 is -S(O)- or -S(O)$_2$-;

Q^3 is -C(R^{21})$_2$-, =C(R^{21})-, -N(R^{28})-, -O-, -S-, -C(R^{21})(-)- or -N(-)-,

where the heterocyclic ring can be bonded to the group A via the free bond in the groups -C(R^{21})(-)- or -N(-)- representing Q^3 or via any other desired ring carbon atom and where, if the heterocyclic ring is bonded to a ring system contained in the group A, the heterocyclic ring can also be fused via two adjacent atoms to the ring system in the group A;

R^2 is hydrogen, (C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical or (C_3-C_8)-cycloalkyl;

R^3 is hydrogen, (C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, (C_3-C_8)-cycloalkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, (C_2-C_8)-alkenylcarbonyl, (C_2-C_8)-alkynylcarbonyl, pyridyl, R^{11}NH, R^4CO, COOR^4, CON(CH_3)R^4, CONHR^4, CSNHR^4, COOR^{15}, CON(CH_3)R^{15} or CONHR^{15};

R^4 is hydrogen or (C_1-C_{28})-alkyl which can optionally be mono- or polysubstituted by

identical or different radicals from the group consisting of hydroxyl, hydroxycarbonyl, aminocarbonyl, mono- or di-((C_1-C_{18})-alkyl)aminocarbonyl, amino-(C_2-C_{18})-alkylaminocarbonyl, amino-(C_1-C_3)-alkylphenyl-(C_1-C_3)-alkylaminocarbonyl, (C_1-C_{18})-alkylcarbonylamino-(C_1-C_3)-alkylphenyl-(C_1-C_3)-alkylaminocarbonyl, (C_1-C_{18})-alkylcarbonylamino-(C_2-C_{18})-alkylaminocarbonyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkoxycarbonyl which can also be substituted in the aryl radical, amino, mercapto, (C_1-C_{18})-alkoxy, (C_1-C_{18})-alkoxycarbonyl, optionally substituted (C_3-C_8)-cycloalkyl, $HOS(O)_2$-(C_1-C_3)-alkyl, $R^9NHS(O)_2$-(C_1-C_3)-alkyl, $(R^8O)_2P(O)$-(C_1-C_3)-alkyl, tetrazolyl-(C_1-C_3)-alkyl, halogen, nitro, trifluoromethyl or the radical R^5;

R^5 is optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, a mono- or bicyclic 5- to 12-membered heterocyclic ring which can be aromatic, partially hydrogenated or completely hydrogenated and which can contain one, two or three identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur, a radical R^6 or a radical R^6CO-, where the aryl radical and, independently thereof, the heterocyclic radical can be mono- or polysubstituted by identical or different radicals from the group consisting of (C_1-C_{18})-alkyl, (C_1-C_{18})-alkoxy, halogen, nitro, amino or trifluoromethyl;

R^6 is R^7R^8N, R^7O or R^7S or an amino acid side chain, a natural or unnatural amino acid, imino acid, optionally N-(C_1-C_8)-alkylated or N-((C_6-C_{14})-aryl-(C_1-C_8)-alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or in which the peptide bond can be reduced to -NH-CH_2-, and their esters and amides, where hydrogen or hydroxymethyl can optionally stand in place of of free functional groups and/or where free functional groups can be protected by protective groups customary in peptide chemistry;

R^7 is hydrogen, (C_1-C_{18})-alkyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl, (C_1-C_{18})-alkylcarbonyl, (C_1-C_{18})-alkoxycarbonyl, (C_6-C_{14})-arylcarbonyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkylcarbonyl or (C_6-C_{14})-aryl-(C_1-C_{18})-alkyloxycarbonyl, where the alkyl groups can optionally be substituted by an amino group and/or where the aryl radicals can be mono- or polysubstituted, by identical or different radicals from the group consisting of (C_1-C_8)-alkyl, (C_1-C_8)-alkoxy, halogen, nitro, amino and trifluoromethyl, or is a natural or unnatural amino acid, imino acid, optionally N-(C_1-C_8)-alkylated or N-((C_6-C_{14})-aryl-(C_1-C_8)-alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or in which the peptide bond can be reduced to -NH-CH_2-;

R^8 is hydrogen, (C_1-C_{18})-alkyl, optionally substituted (C_6-C_{14})-aryl or (C_6-C_{14})-aryl-(C_1-C_8)-alkyl which can also be substituted in the aryl radical;

R^9 is hydrogen, aminocarbonyl, (C_1-C_{18})-alkylaminocarbonyl, (C_3-C_8)-cycloalkylaminocarbonyl, optionally substituted (C_6-C_{14})-arylaminocarbonyl, (C_1-C_{18})-alkyl, optionally substituted (C_6-C_{14})-aryl or (C_3-C_8)-cycloalkyl;

R^{10} is hydroxyl, (C_1-C_{18})-alkoxy, (C_6-C_{14})-aryl-(C_1-C_8)-alkoxy which can also be substituted in the aryl radical, optionally substituted (C_6-C_{14})-aryloxy, amino or mono- or di-((C_1-C_{18})-alkyl)amino;

R^{11} is hydrogen, (C_1-C_{18})-alkyl, $R^{12}CO$, optionally substituted (C_6-C_{14})-aryl-$S(O)_2$, (C_1-C_{18})-

alkyl-$S(O)_2$, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, $R^9NHS(O)_2$ or the radical R^{15};

R^{12} is hydrogen, (C_1-C_{18})-alkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, optionally substituted (C_6-C_{14})-aryl, (C_1-C_{18})-alkoxy, (C_6-C_{14})-aryl-(C_1-C_8)-alkoxy which can also be substituted in the aryl radical, optionally substituted (C_6-C_{14})-aryloxy, amino or mono- or di-((C_1-C_{18})-alkyl)amino, the radical R^{15} or the radical R^{15}-O-;

R^{13} is hydrogen, (C_1-C_6)-alkyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical or (C_3-C_8)-cycloalkyl;

R^{15} is R^{16}-(C_1-C_6)-alkyl or R^{16};

R^{16} is a 6- to 24-membered bicyclic or tricyclic radical which is saturated or partially unsaturated and which can also contain one to four identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur and which can also be substituted by one or more identical or different substituents from the group consisting of (C_1-C_4)-alkyl and oxo;

R^{21} is hydrogen, (C_1-C_8)-alkyl, hydroxy-(C_1-C_8)-alkyl, (C_2-C_8)-alkenyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl or heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical, where alkyl radicals can be monosubstituted or polysubstituted by fluorine and the radicals R^{21} can be identical or different if they occur two or more times;

R^{22} is (C_1-C_8)-alkyl, hydroxy-(C_1-C_8)-alkyl, (C_2-C_8)-alkenyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl or heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical, where alkyl radicals can be monosubstituted or polysubstituted by fluorine and the radicals R^{22} can be identical or different if they occur two or more times;

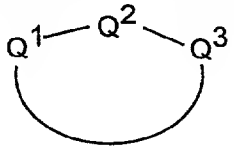
R^{28} is one of the radicals R^{21}-, $R^{21}N(R^{21})$-, $R^{21}C(O)$-, $R^{22}O$-C(O)-, $R^{21}N(R^{21})$-C(O)- or $R^{21}N(R^{21})$-C(=N(R^{21}))-;

R^{29} is one of the radicals R^{22}-, $R^{21}N(R^{21})$-, $R^{21}C(O)$-, $R^{22}O$-C(O)-, $R^{21}N(R^{21})$-C(O)- or $R^{21}N(R^{21})$-C(=N(R^{21}))-;

b, c, d and f independently of one another are 0 or 1, but cannot all simultaneously be 0;
e, g and h independently of one another are 0, 1, 2, 3, 4, 5 or 6;
in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

3. A compound of the formula I as claimed in claim 1, in which R^1 is one of the radicals
-S(O)-N(R^{21})-R^{28}, -$S(O)_2$-N(R^{21})-R^{28},
-O-C(O)-R^{21}, -O-C(O)-OR^{22}, -O-C(O)-N(R^{21})-R^{28}, -O-C(S)-N(R^{21})-R^{28},
-O-$S(O)_2$-N(R^{21})-R^{28}, -O-S(O)-N(R^{21})-R^{28},
-N(R^{29})-C(O)-OR^{22}, -N(R^{28})-C(S)-R^{21},
-N(R^{28})-C(O)-N(R^{21})-R^{28}, -N(R^{28})-C(S)-N(R^{21})-R^{28},
-N(R^{28})-$S(O)_2$-R^{22}, -N(R^{28})-S(O)-R^{22}, -N(R^{28})-$S(O)_2$-OR^{21}, -N(R^{28})-S(O)-OR^{21},

$-N(R^{28})-S(O)_2-N(R^{21})-R^{28}$, $-N(R^{28})-S(O)-N(R^{21})-R^{28}$,
$-C(S)-R^{21}$, $-C(S)-N(R^{21})-R^{28}$ or cyano or the radical of an optionally substituted, 5- to 14-membered, mono- or polycyclic, saturated or unsaturated heterocyclic ring of the formula



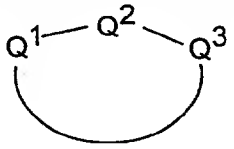
in which
Q^1 is $-C(R^{21})_2-$, $=C(R^{21})-$, $-N(R^{28})-$, -O- or -S-;
Q^2 is -S(O)- or $-S(O)_2-$;
Q^3 is $-C(R^{21})_2-$, $=C(R^{21})-$, $-N(R^{28})-$, -O-, -S-, $-C(R^{21})(-)-$ or -N(-)-,
where the heterocyclic ring can be bonded to the group A via the free bond in the groups $-C(R^{21})(-)-$ or -N(-)- representing Q^3 or via any other desired ring carbon atom and where, if the heterocyclic ring is bonded to a ring system contained in the group A, the heterocyclic ring can also be fused via two adjacent atoms to the ring system in the group A;
in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

4. A compound of the formula I as claimed in claim 1, in which R^0 is (C_1-C_8)-alkyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl or heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical; in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

5. A compound of the formula I as claimed in claim 4, wherein R^0 is selected from the group consisting of biphenylylmethyl, naphthylmethyl, and benzyl, each of which is unsubstituted or monosubstituted or polysubstituted in the aryl radical; in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

6. A compound of the formula I as claimed in claim 1, in which simultaneously
W is R^1-A-CH=C and therein A is a phenylene radical or a methylenephenyl radical, or W is R^1-A-$C(R^{13})$ and therein A is a bivalent radical from the group consisting of methylene, ethylene, trimethylene, tetramethylene, pentamethylene, cyclohexylene, phenylene, phenylenemethyl, methylenephenyl, methylenephenylmethyl;
B is a bivalent radical from the group consisting of methylene, ethylene, trimethylene, tetramethylene, vinylene, phenylene, or substituted methylene or ethylene;
E is $R^{10}CO$;
R is hydrogen, (C_1-C_6)-alkyl or benzyl;
R^0 is (C_1-C_8)-alkyl, (C_3-C_8)-cycloalkyl, optionally substituted (C_6-C_{14})-aryl or (C_6-C_{14})-aryl-

(C_1-C_8)-alkyl optionally substituted in the aryl radical;
R^1 is one of the radicals -S(O)-N(R^{21})-R^{28}, -S(O)$_2$-N(R^{21})-R^{28},
-O-C(O)-R^{21}, -O-C(O)-OR^{22}, -O-C(O)-N(R^{21})-R^{28}, -O-C(S)-N(R^{21})-R^{28},
-O-S(O)$_2$-N(R^{21})-R^{28}, -O-S(O)-N(R^{21})-R^{28},
-N(R^{29})-C(O)-OR^{22}, -N(R^{28})-C(S)-R^{21},
-N(R^{28})-C(O)-N(R^{21})-R^{28}, -N(R^{28})-C(S)-N(R^{21})-R^{28},
-N(R^{28})-S(O)$_2$-R^{22}, -N(R^{28})-S(O)-R^{22}, -N(R^{28})-S(O)$_2$-OR^{21}, -N(R^{28})-S(O)-OR^{21},
-N(R^{28})-S(O)$_2$-N(R^{21})-R^{28}, -N(R^{28})-S(O)-N(R^{21})-R^{28},
-C(S)-R^{21}, -C(S)-N(R^{21})-R^{28} or cyano or the radical of an optionally substituted, 5- to 14-membered, mono- or polycyclic, saturated or unsaturated heterocyclic ring of the formula



in which
Q^1 is -C(R^{21})$_2$-, =C(R^{21})-, -N(R^{28})-, -O- or -S-;
Q^2 is -S(O)- or -S(O)$_2$-;
Q^3 is -C(R^{21})$_2$-, =C(R^{21})-, -N(R^{28})-, -O-, -S-, -C(R^{21})(-)- or -N(-)-,
where the heterocyclic ring can be bonded to the group A via the free bond in the groups -C(R^{21})(-)- or -N(-)- representing Q^3 or via any other desired ring carbon atom and where, if the heterocyclic ring is bonded to a ring system contained in the group A, the heterocyclic ring can also be fused via two adjacent atoms to the ring system in the group A;
R^2 is hydrogen or (C_1-C_8)-alkyl.
R^3 is (C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl, (C_3-C_8)-cycloalkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, pyridyl, R^{11}NH, R^4CO, COOR^4, CONHR^4, CSNHR^4, COOR^{15} and CONHR^{15};
and e, g and h independently of one another are the numbers 0, 1, 2 or 3;
in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

7. A compound of the formula I as claimed in claim 1, in which W is R^1-A-C(R^{13}) and R^{13} is (C_1-C_6)-alkyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical or (C_3-C_8)-cycloalkyl; in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

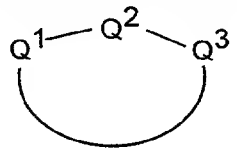
8. A compound of the formula I as claimed in claim 1, in which R^3 is optionally substituted (C_6-C_{14})-aryl, COOR^4, R^{11}NH or CONHR^4, where -NHR^4 is the radical of an α-amino acid, its ω-amino-(C_2-C_8)-alkylamide, its (C_1-C_8)-alkyl ester, its (C_6-C_{14})-aryl-(C_1-C_4)-alkyl ester or its derivative in which the carboxylic acid group is converted into the group Het-CO, in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

9. A compound of the formula I as claimed in claim 8, wherein the radical of the α-amino acids is selected from the group consisting of valine, lysine, phenylglycine, phenylalanine, tryptophan, their (C_1-C_8)-alkyl esters, their (C_6-C_{14})-aryl-(C_1-C_4)-alkyl esters, and Het-CO derivatives; in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

10. A compound of the formula I as claimed in claimed 1, in which simultaneously
W is R^1-A-C(R^{13});
Y is a carbonyl group;
Z is N(R^0);
A is ethylene, trimethylene, tetramethylene, pentamethylene, cyclohexylene, phenylene, phenylenemethyl, methylenephenyl or methylenephenylmethyl;
B is an unsubstituted or substituted methylene radical;
D is C(R^2)(R^3);
E is R^{10}CO;
R is hydrogen or (C_1-C_4)-alkyl;
R^0 is (C_1-C_8)-alkyl, (C_3-C_8)-cycloalkyl, optionally substituted (C_6-C_{14})-aryl or (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical;
R^1 is one of the radicals -O-C(O)-R^{21}, -O-C(O)-OR^{22}, -O-C(O)-N(R^{21})-R^{28}, -N(R^{29})-C(O)-OR^{22}, -N(R^{28})-C(O)-N(R^{21})-R^{28}, -N(R^{28})-C(S)-N(R^{21})-R^{28} or cyano;
R^2 is hydrogen;
R^3 is the radical CONHR^4;
R^4 is methyl which is substituted by hydroxycarbonyl and a radical from the group consisting of (C_1-C_4)-alkyl, phenyl and benzyl, or is methyl which is substituted by (C_1-C_8)-alkoxycarbonyl and a radical from the group consisting of (C_1-C_4)-alkyl, phenyl and benzyl, or is methyl which is substituted by Het-CO and a radical from the group consisting of (C_1-C_4)-alkyl, phenyl and benzyl;
R^{10} is hydroxyl or (C_1-C_8)-alkoxy;
R^{13} is (C_1-C_6)-alkyl, (C_3-C_7)-cycloalkyl or benzyl;
b, c and d are 1 and e, f and g are 0;
h is 1 or 2;
in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

11. A compound of the formula I as claimed in claim 1, in which simultaneously
W is R^1-A-CH=C and therein A is a phenylene radical or a methylenephenyl radical, or W is R^1-A-C(R^{13}) and therein A is a bivalent radical from the group consisting of methylene, ethylene, trimethylene, tetramethylene, pentamethylene, cyclohexylene, phenylene, phenylenemethyl, methylenephenyl, methylenephenylmethyl;
B is a bivalent radical from the group consisting of methylene, ethylene, trimethylene, tetramethylene, vinylene, phenylene or substituted methylene or ethylene;
E is R^{10}CO;

R is hydrogen or (C_1-C_6)-alkyl;
R^0 is (C_1-C_8)-alkyl, (C_3-C_8)-cycloalkyl, optionally substituted (C_6-C_{14})-aryl or (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical;
R^1 is one of the radicals $-S(O)-N(R^{21})-R^{28}$, $-S(O)_2-N(R^{21})-R^{28}$,
$-O-C(O)-R^{21}$, $-O-C(O)-OR^{22}$, $-O-C(O)-N(R^{21})-R^{28}$, $-O-C(S)-N(R^{21})-R^{28}$,
$-O-S(O)_2-N(R^{21})-R^{28}$, $-O-S(O)-N(R^{21})-R^{28}$,
$-N(R^{29})-C(O)-OR^{22}$, $-N(R^{28})-C(S)-R^{21}$,
$-N(R^{28})-C(O)-N(R^{21})-R^{28}$, $-N(R^{28})-C(S)-N(R^{21})-R^{28}$,
$-N(R^{28})-S(O)_2-R^{22}$, $-N(R^{28})-S(O)-R^{22}$, $-N(R^{28})-S(O)_2-OR^{21}$, $-N(R^{28})-S(O)-OR^{21}$,
$-N(R^{28})-S(O)_2-N(R^{21})-R^{28}$, $-N(R^{28})-S(O)-N(R^{21})-R^{28}$,
$-C(S)-R^{21}$, $-C(S)-N(R^{21})-R^{28}$ or cyano or the radical of an optionally substituted, 5- to 14-membered, mono- or polycyclic, saturated or unsaturated heterocyclic ring of the formula



in which
Q^1 is $-C(R^{21})_2-$, $=C(R^{21})-$, $-N(R^{28})-$, $-O-$ or $-S-$;
Q^2 is $-S(O)-$ or $-S(O)_2-$;
Q^3 is $-C(R^{21})_2-$, $=C(R^{21})-$, $-N(R^{28})-$, $-O-$, $-S-$, $-C(R^{21})(-)-$ or $-N(-)-$,
where the heterocyclic ring can be bonded to the group A via the free bond in the groups $-C(R^{21})(-)-$ or $-N(-)-$ representing Q^3 or via any other desired ring carbon atom and where, if the heterocyclic ring is bonded to a ring system contained in the group A, the heterocyclic ring can also be fused via two adjacent atoms to the ring system in the group A;
R^2 is hydrogen or (C_1-C_8)-alkyl;
R^3 is $CONHR^{15}$ or $CONHR^4$ where R^4 herein is a (C_1-C_8)-alkyl radical which is unsubstituted or substituted by one or more (C_6-C_{14})-aryl radicals;
R^{15} is $R^{16}-(C_1-C_6)$-alkyl or R^{16}, where R^{16} is a 7- to 12-membered bridged bicyclic or tricyclic radical which is saturated or partially unsaturated and which can also contain one to four identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur and which can also be substituted by one or more identical or different substituents from the group consisting of (C_1-C_4)-alkyl and oxo;
and e, g and h independently of one another are the numbers 0, 1, 2 or 3 and b, c and d are 1;
in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

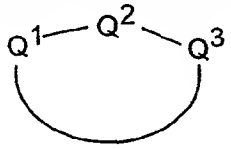
12. A compound of the formula I as claimed in claim 11, wherein R^{15} is an adamantyl radical or an adamantylmethyl radical; in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

13. A compound of the formula I as claimed in claim 1, in which simultaneously

W is R^1-A-C(R^{13});
Y is a carbonyl group;
Z is N(R^0);
A is ethylene, trimethylene, tetramethylene, pentamethylene, cyclohexylene, phenylene, phenylenemethyl, methylenephenyl or methylenephenylmethyl;
B is an unsubstituted or substituted methylene radical;
D is C(R^2)(R^3);
E is R^{10}CO;
R is hydrogen or (C_1-C_4)-alkyl;
R^0 is (C_1-C_8)-alkyl, (C_3-C_8)-cycloalkyl, optionally substituted (C_6-C_{14})-aryl or (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical;
R^1 is one of the radicals -O-C(O)-R^{21}, -O-C(O)-OR^{22} , -O-C(O)-N(R^{21})-R^{28}, -N(R^{29})-C(O)-OR^{22}, -N(R^{28})-C(O)-N(R^{21})-R^{28}, -N(R^{28})-C(S)-N(R^{21})-R^{28} or cyano;
R^2 is hydrogen;
R^3 is CONHR^{15} or CONHR^4 where R^4 herein is a (C_1-C_6)-alkyl radical which is unsubstituted or substituted by one or more (C_6-C_{10})-aryl radicals;
R^{10} is hydroxyl or (C_1-C_8)-alkoxy;
R^{13} is (C_1-C_6)-alkyl, (C_3-C_7)-cycloalkyl or benzyl;
R^{15} is an adamantyl radical or an adamantylmethyl radical;
b, c and d are 1 and e, f and g are 0;
h is 1 or 2;
in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

14. A compound of the formula I as claimed in claim 1, in which simultaneously
W is R^1-A-C(R^{13});
Y is a carbonyl group;
Z is N(R^0);
A is ethylene, trimethylene, tetramethylene, pentamethylene, cyclohexylene, phenylene, phenylenemethyl, methylenephenyl, methylenephenylmethyl;
B is an unsubstituted or substituted methylene radical or ethylene radical;
D is C(R^2)(R^3);
E is R^{10}CO;
R is hydrogen or (C_1-C_4)-alkyl;
R^0 is (C_1-C_8)-alkyl, (C_3-C_8)-cycloalkyl, optionally substituted (C_6-C_{14})-aryl or (C_6-C_{14})-aryl-(C_1-C_8)-alkyl which is optionally substituted in the aryl radical;
R^1 is one of the radicals -S(O)-N(R^{21})-R^{28}, -S($O)_2$-N(R^{21})-R^{28}, -O-C(O)-R^{21}, -O-C(O)-OR^{22}, -O-C(O)-N(R^{21})-R^{28}, -O-C(S)-N(R^{21})-R^{28}, -O-S($O)_2$-N(R^{21})-R^{28}, -O-S(O)-N(R^{21})-R^{28}, -N(R^{29})-C(O)-OR^{22}, -N(R^{28})-C(S)-R^{21}, -N(R^{28})-C(O)-N(R^{21})-R^{28}, -N(R^{28})-C(S)-N(R^{21})-R^{28}, -N(R^{28})-S($O)_2$-R^{22}, -N(R^{28})-S(O)-R^{22}, -N(R^{28})-S($O)_2$-OR^{21}, -N(R^{28})-S(O)-OR^{21},

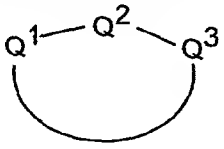
$-N(R^{28})-S(O)_2-N(R^{21})-R^{28}$, $-N(R^{28})-S(O)-N(R^{21})-R^{28}$,
$-C(S)-R^{21}$, $-C(S)-N(R^{21})-R^{28}$ or cyano or the radical of an optionally substituted, 5- to 14-membered, mono- or polycyclic, saturated or unsaturated heterocyclic ring of the formula



in which
Q^1 is $-C(R^{21})_2-$, $=C(R^{21})-$, $-N(R^{28})-$, -O- or -S-;
Q^2 is -S(O)- or $-S(O)_2-$;
Q^3 is $-C(R^{21})_2-$, $=C(R^{21})-$, $-N(R^{28})-$, -O-, -S-, $-C(R^{21})(-)-$ or -N(-)-,
where the heterocyclic ring can be bonded to the group A via the free bond in the groups $-C(R^{21})(-)-$ or -N(-)- representing Q^3 or via any other desired ring carbon atom and where, if the heterocyclic ring is bonded to a ring system contained in the group A, the heterocyclic ring can also be fused via two adjacent atoms to the ring system in the group A;
R^2 is hydrogen;
R^3 is an unsubstituted phenyl radical or naphthyl radical, a phenyl radical or naphthyl radical substituted by one, two or three identical or different radicals from the group consisting of (C_1-C_4)-alkyl, (C_1-C_4)-alkoxy, hydroxyl, halogen, trifluoromethyl, nitro, methylenedioxy, ethylenedioxy, hydroxycarbonyl, (C_1-C_4)-alkoxycarbonyl, aminocarbonyl, cyano, phenyl, phenoxy and benzyloxy, a pyridyl radical, a (C_1-C_4)-alkyl radical, a (C_2-C_4)-alkenyl radical, a (C_2-C_4)-alkynyl radical or a (C_5-C_6)-cycloalkyl radical;
R^{10} is hydroxyl or (C_1-C_8)-alkoxy;
R^{13} is (C_1-C_6)-alkyl, (C_3-C_7)-cycloalkyl or benzyl;
b, c and d are 1 and e, f and g are 0;
h is 1 or 2;
in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

15. A compound of the formula I as claimed in claim 1, in which simultaneously
W is R^1-A-$C(R^{13})$;
Y is a carbonyl group;
Z is $N(R^0)$;
A is ethylene, trimethylene, tetramethylene, pentamethylene, cyclohexylene, phenylene, phenylenemethyl, methylenephenyl, methylenephenylmethyl;
B is an unsubstituted or substituted methylene radical or ethylene radical;
D is $C(R^2)(R^3)$;
E is $R^{10}CO$;
R is hydrogen or (C_1-C_4)-alkyl;
R^0 is (C_1-C_8)-alkyl, (C_3-C_8)-cycloalkyl, optionally substituted (C_6-C_{14})-aryl or (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical;

R^1 is one of the radicals -S(O)-N(R^{21})-R^{28}, -S($O)_2$-N(R^{21})-R^{28}, -O-C(O)-R^{21}, -O-C(O)-OR^{22}, -O-C(O)-N(R^{21})-R^{28}, -O-C(S)-N(R^{21})-R^{28}, -O-S($O)_2$-N(R^{21})-R^{28}, -O-S(O)-N(R^{21})-R^{28}, -N(R^{29})-C(O)-OR^{22}, -N(R^{28})-C(S)-R^{21}, -N(R^{28})-C(O)-N(R^{21})-R^{28}, -N(R^{28})-C(S)-N(R^{21})-R^{28}, -N(R^{28})-S($O)_2$-R^{22}, -N(R^{28})-S(O)-R^{22}, -N(R^{28})-S($O)_2$-OR^{21}, -N(R^{28})-S(O)-OR^{21}, -N(R^{28})-S($O)_2$-N(R^{21})-R^{28}, -N(R^{28})-S(O)-N(R^{21})-R^{28}, -C(S)-R^{21}, -C(S)-N(R^{21})-R^{28} or cyano or the radical of an optionally substituted, 5- to 14-membered, mono- or polycyclic, saturated or unsaturated heterocyclic ring of the formula



in which
Q^1 is -C(R^{21})$_2$-, =C(R^{21})-, -N(R^{28})-, -O- or -S-;
Q^2 is -S(O)- or -S($O)_2$-;
Q^3 is -C(R^{21})$_2$-, =C(R^{21})-, -N(R^{28})-, -O-, -S-, -C(R^{21})(-)- or -N(-)-,
where the heterocyclic ring can be bonded to the group A via the free bond in the groups -C(R^{21})(-)- or -N(-)- representing Q^3 or via any other desired ring carbon atom and where, if the heterocyclic ring is bonded to a ring system contained in the group A, the heterocyclic ring can also be fused via two adjacent atoms to the ring system in the group A;
R^2 is hydrogen;
R^3 is R^{11}NH;
R^{10} is hydroxyl or (C_1-C_8)-alkoxy;
R^{13} is (C_1-C_6)-alkyl, (C_3-C_7)-cycloalkyl or benzyl;
b, c, d and e are 1 and f and g are 0;
h is 0;
in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

16. A compound of the formula I as claimed in claim 15, in which
R^{11} is R^{12a}, R^{12a}-CO, R^{12a}-O-CO, R^{12b}-CO, R^{12b}-CS or R^{12a}-S($O)_2$;
R^{12a} is (C_1-C_{10})-alkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl, heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical or the radical R^{15};
R^{12b} is R^{12a}-NH;
in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

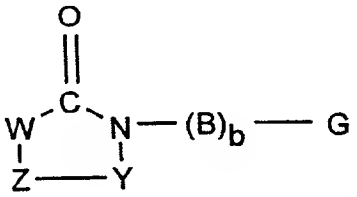
17. A compound of the formula I as claimed in claim 1, in which a substituted methylene radical or substituted ethylene radical representing the group B carries as a substituent a radical from the group consisting of (C_1-C_8)-alkyl, (C_2-C_6)-alkenyl, (C_2-C_6)-alkynyl, and

(C_3-C_8)-cycloalkyl, (C_3-C_8)-cycloalkyl-(C_1-C_4)-alkyl, optionally substituted (C_6-C_{10})-aryl, (C_6-C_{10})-aryl-(C_1-C_4)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl, and heteroaryl-(C_1-C_4)-alkyl optionally substituted in the heteroaryl radical, in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

18. A compound of the formula I as claimed in claim 1, in which B is an unsubstituted methylene radical or a methylene radical which is substituted by a (C_1-C_8)-alkyl radical; in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

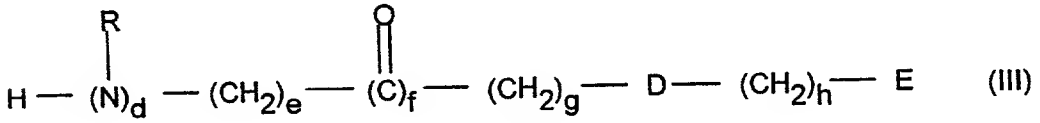
19. A compound of the formula I as claimed in claim 1, in which R^1 is one of the radicals -O-C(O)-R^{21}, -O-C(O)-OR^{22} , -O-C(O)-N(R^{21})-R^{28}, -N(R^{29})-C(O)-OR^{22}, -N(R^{28})-C(O)-N(R^{21})-R^{28}, -N(R^{28})-C(S)-N(R^{21})-R^{28} or cyano; in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts.

20. A process for the preparation of compounds of the formula I as claimed in claim 1, which comprises carrying out a fragment condensation of a compound of the formula II



(II)

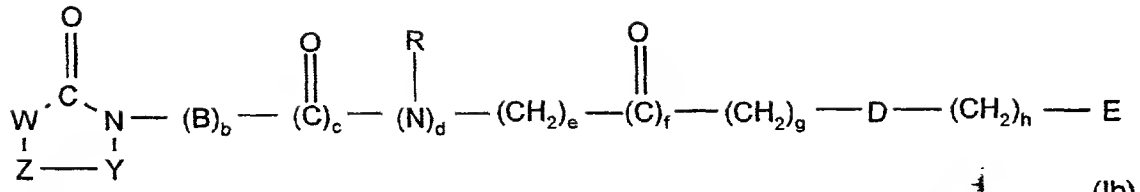
with a compound of the formula III



(III)

where W, Y, Z, B, D, E and R, and b, d, e, f, g, and h are defined as indicated in claim 1 and G is hydroxycarbonyl, (C_1-C_6)-alkoxycarbonyl, activated carboxylic acid derivatives.

21. A pharmaceutical preparation comprising an effective amount of one or more compounds of the formula Ib.



(Ib)

in which

W is R^1-A-C(R^{13}) or R^1-A-CH=C;

Y is a carbonyl, thiocarbonyl or methylene group;

Z is N(R^0), oxygen, sulfur or a methylene group;

A is a bivalent radical from the group consisting of (C_1-C_6)-alkylene, (C_3-C_{12})-cycloalkylene, (C_1-C_6)-alkylene-(C_3-C_{12})-cycloalkyl, phenylene, phenylene-(C_1-C_6)-alkyl, (C_1-C_6)-alkylenephenyl, (C_1-C_6)-alkylenephenyl-(C_1-C_6)-alkyl, phenylene-(C_2-C_6)-alkenyl or a bivalent radical of a 5- or 6-membered, saturated or unsaturated ring, which can contain 1 or 2 nitrogen atoms and can be mono- or disubstituted by (C_1-C_6)-alkyl or doubly bonded oxygen or sulfur or is a direct bond;

B is a bivalent radical from the group consisting of (C_1-C_6)-alkylene, (C_2-C_6)-alkenylene, phenylene, phenylene-(C_1-C_3)-alkyl, (C_1-C_3)-alkylenephenyl where the bivalent (C_1-C_6)-alkylene radical can be unsubstituted or substituted by a radical from the group consisting of (C_1-C_8)-alkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, (C_3-C_{10})-cycloalkyl, (C_3-C_{10})-cycloalkyl-(C_1-C_6)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_6)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl and heteroaryl-(C_1-C_6)-alkyl optionally substituted in the heteroaryl radical;

D is C(R^2)(R^3), N(R^3) or CH=C(R^3);

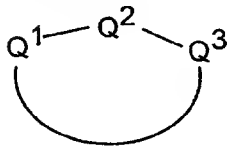
E is tetrazolyl, (R^8O)$_2$P(O), HOS(O)$_2$, R^9NHS(O)$_2$ or R^{10}CO;

R is hydrogen, (C_1-C_8)-alkyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl or heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical, where alkyl radicals can be mono- or polysubstituted by fluorine;

R^0 is hydrogen, (C_1-C_8)-alkyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, (C_6-C_{12})-bicycloalkyl, (C_6-C_{12})-bicycloalkyl-(C_1-C_8)-alkyl, (C_6-C_{12})-tricycloalkyl, (C_6-C_{12})-tricycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl, heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical, CHO, (C_1-C_8)-alkyl-CO, (C_3-C_{12})-cycloalkyl-CO, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl-CO, (C_6-C_{12})-bicycloalkyl-CO, (C_6-C_{12})-bicycloalkyl-(C_1-C_8)-alkyl-CO, (C_6-C_{12})-tricycloalkyl-CO, (C_6-C_{12})-tricycloalkyl-(C_1-C_8)-alkyl-CO, optionally substituted (C_6-C_{14})-aryl-CO, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl-CO optionally substituted in the aryl radical, optionally substituted heteroaryl-CO, heteroaryl-(C_1-C_8)-alkyl-CO optionally substituted in the heteroaryl radical, (C_1-C_8)-alkyl-S(O)$_n$, (C_3-C_{12})-cycloalkyl-S(O)$_n$, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl-S(O)$_n$, (C_6-C_{12})-bicycloalkyl-S(O)$_n$, (C_6-C_{12})-bicycloalkyl-(C_1-C_8)-alkyl-

$S(O)_n$, $(C_6$-$C_{12})$-tricycloalkyl-$S(O)_n$, $(C_6$-$C_{12})$-tricycloalkyl-$(C_1$-$C_8)$-alkyl-$S(O)_n$, optionally substituted $(C_6$-$C_{14})$-aryl-$S(O)_n$, $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl-$S(O)_n$ optionally substituted in the aryl radical, optionally substituted heteroaryl-$S(O)_n$ or heteroaryl-$(C_1$-$C_8)$-alkyl-$S(O)_n$ optionally substituted in the heteroaryl radical, where n is 1 or 2;

R^1 is one of the radicals $-S-R^{21}$, $-S-S-R^{21}$, $-S(O)-R^{22}$, $-S(O)_2-R^{22}$, $-S-OR^{21}$, $-S(O)-OR^{21}$, $-S(O)_2-OR^{21}$, $-S-N(R^{21})-R^{28}$, $-S(O)-N(R^{21})-R^{28}$, $-S(O)_2-N(R^{21})-R^{28}$, $-S-C(O)-R^{21}$, $-S-C(O)-OR^{22}$, $-S-C(S)-SR^{22}$, $-S-C(O)-N(R^{21})-R^{28}$, $-S-C(S)-N(R^{21})-R^{28}$, $-O-C(O)-R^{21}$, $-O-C(S)-R^{21}$, $-O-C(O)-OR^{22}$, $-O-C(O)-N(R^{21})-R^{28}$, $-O-C(S)-N(R^{21})-R^{28}$, $-O-S(O)_2-OR^{21}$, $-O-S(O)-OR^{21}$, $-O-S(O)_2-N(R^{21})-R^{28}$, $-O-S(O)-N(R^{21})-R^{28}$, $-O-S(O)_2-R^{22}$, $-O-S(O)-R^{22}$, $-O-P(O)(OR^{21})_2$, $-O-P(O)(OR^{21})-N(R^{21})-R^{28}$, $-O-P(O)(N(R^{21})-R^{28})_2$, $-N(R^{29})-C(O)-OR^{22}$, $-N(R^{28})-C(O)-SR^{22}$, $-N(R^{28})-C(S)-OR^{22}$, $-N(R^{28})-C(S)-SR^{22}$, $-N(R^{28})-C(S)-R^{21}$, $-N(R^{28})-C(O)-N(R^{21})-R^{28}$, $-N(R^{28})-C(S)-N(R^{21})-R^{28}$, $-N(R^{28})-S(O)_2-R^{22}$, $-N(R^{28})-S(O)-R^{22}$, $-N(R^{28})-S(O)_2-OR^{21}$, $-N(R^{28})-S(O)-OR^{21}$, $-N(R^{28})-S(O)_2-N(R^{21})-R^{28}$, $-N(R^{28})-S(O)-N(R^{21})-R^{28}$, $-N(R^{28})-P(O)(OR^{21})_2$, $-N(R^{28})-P(O)(OR^{21})-N(R^{21})-R^{28}$, $-N(R^{28})-P(O)(N(R^{21})-R^{28})_2$, $-N(R^{28})-P(O)(R^{22})-OR^{21}$, $-N(R^{28})-P(O)(R^{22})-N(R^{21})-R^{28}$, $-N(R^{28})-P(O)(R^{22})_2$, $-P(O)(OR^{21})_2$, $-P(O)(OR^{21})-N(R^{21})-R^{28}$, $-P(O)(N(R^{21})-R^{28})_2$, $-P(O)(R^{22})-OR^{21}$, $-P(O)(R^{22})-N(R^{21})-R^{28}$, $-P(O)(R^{22})_2$, $-C(S)-R^{21}$, $-C(S)-SR^{21}$, $-C(S)-N(R^{21})-R^{28}$, cyano, halogen, nitro or methylenedioxy or the radical of an optionally substituted, 5- to 14-membered, mono- or polycyclic, saturated or unsaturated heterocyclic ring of the formula



in which

Q^1 is $-C(R^{21})_2-$, $=C(R^{21})-$, $-N(R^{28})-$, $-O-$ or $-S-$;

Q^2 is $-S(O)-$ or $-S(O)_2-$;

Q^3 is $-C(R^{21})_2-$, $=C(R^{21})-$, $-N(R^{28})-$, $-O-$, $-S-$, $-C(R^{21})(-)-$ or $-N(-)-$,

where the heterocyclic ring can be bonded to the group A via the free bond in the groups $-C(R^{21})(-)-$ or $-N(-)-$ representing Q^3 or via any other desired ring carbon atom and where, if the heterocyclic ring is bonded to a ring system contained in the group A, the heterocyclic ring can also be fused via two adjacent atoms to the ring system in the group A;

R^2 is hydrogen, (C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical or (C_3-C_8)-cycloalkyl;

R^3 is hydrogen, (C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optinally substituted in the aryl radical, (C_3-C_8)-cycloalkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, (C_2-C_8)-alkenylcarbonyl, (C_2-C_8)-alkynylcarbonyl, pyridyl, $R^{11}NH$, R^4CO, $COOR^4$, $CON(CH_3)R^4$, $CONHR^4$, $CSNHR^4$, $COOR^{15}$, $CON(CH_3)R^{15}$ or $CONHR^{15}$;

R^4 is hydrogen or (C_1-C_{28})-alkyl which can optionally be mono- or polysubstituted by identical or different radicals from the group consisting of hydroxyl, hydroxycarbonyl, aminocarbonyl, mono- or di-$((C_1-C_{18})$-alkyl)aminocarbonyl, amino-(C_2-C_{18})-alkylaminocarbonyl, amino-(C_1-C_3)-alkylphenyl-(C_1-C_3)-alkylaminocarbonyl, (C_1-C_{18})-alkylcarbonylamino-(C_1-C_3)-alkylphenyl-(C_1-C_3)-alkylaminocarbonyl, (C_1-C_{18})-alkylcarbonylamino-(C_2-C_{18})-alkylaminocarbonyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkoxycarbonyl which can also be substituted in the aryl radical, amino, mercapto, (C_1-C_{18})-alkoxy, (C_1-C_{18})-alkoxycarbonyl, Het-CO, optionally substituted (C_3-C_8)-cycloalkyl, $HOS(O)_2$-(C_1-C_3)-alkyl, $R^9NHS(O)_2$-(C_1-C_3)-alkyl, $(R^8O)_2P(O)$-(C_1-C_3)-alkyl, tetrazolyl-(C_1-C_3)-alkyl, halogen, nitro, trifluoromethyl or the radical R^5;

R^5 is optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, a mono- or bicyclic 5- to 12-membered heterocyclic ring which can be aromatic, partially hydrogenated or completely hydrogenated and which can contain one, two or three identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur, a radical R^6 or a radical R^6CO-, where the aryl radical and, independently thereof, the heterocyclic radical can be mono- or polysubstituted by identical or different radicals from the group consisting of (C_1-C_{18})-alkyl, (C_1-C_{18})-alkoxy, halogen, nitro, amino and trifluoromethyl;

R^6 is R^7R^8N, R^7O or R^7S or an amino acid side chain, a natural or unnatural amino acid, imino acid, optionally N-(C_1-C_8)-alkylated or N-$((C_6-C_{14})$-aryl-(C_1-C_8)-alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or in which the peptide bond can be reduced to $-NH-CH_2-$, and its esters and amides, where hydrogen or hydroxymethyl can optionally stand in place of of free functional groups and/or where free functional groups can be protected by protective groups customary in peptide chemistry;

R^7 is hydrogen, (C_1-C_{18})-alkyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl, (C_1-C_{18})-alkylcarbonyl, (C_1-C_{18})-alkoxycarbonyl, (C_6-C_{14})-arylcarbonyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkylcarbonyl or (C_6-C_{14})-aryl-(C_1-C_{18})-alkyloxycarbonyl, where the alkyl groups can optionally be substituted by an amino group and/or where the aryl radicals can be mono- or polysubstituted, preferably monosubstituted, by identical or different radicals from the group consisting of (C_1-C_8)-alkyl, (C_1-C_8)-alkoxy, halogen, nitro, amino and trifluoromethyl, or is a natural or unnatural amino acid, imino acid, optionally N-(C_1-C_8)-alkylated or N-$((C_6-C_{14})$-aryl-(C_1-C_8)-alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or in which the peptide bond can be reduced to $-NH-CH_2-$;

R^8 is hydrogen, (C_1-C_{18})-alkyl, optionally substituted (C_6-C_{14})-aryl or (C_6-C_{14})-aryl-(C_1-C_8)-alkyl which can also be substituted in the aryl radical;

R^9 is hydrogen, aminocarbonyl, (C_1-C_{18})-alkylaminocarbonyl, (C_3-C_8)-cycloalkylaminocarbonyl, optionally substituted (C_6-C_{14})-arylaminocarbonyl, (C_1-C_{18})-alkyl, optionally substituted (C_6-C_{14})-aryl or (C_3-C_8)-cycloalkyl;

R^{10} is hydroxyl, (C_1-C_{18})-alkoxy, (C_6-C_{14})-aryl-(C_1-C_8)-alkoxy which can also be substituted in the aryl radical, optionally substituted (C_6-C_{14})-aryloxy, amino or mono- or di-$((C_1-C_{18})$-alkyl)amino;

R^{11} is hydrogen, R^{12a}, R^{12a}-CO, H-CO, R^{12a}-O-CO, R^{12b}-CO, R^{12b}-CS, R^{12a}-$S(O)_2$ or R^{12b}-$S(O)_2$;

R^{12a} is (C_1-C_{18})-alkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl, heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical or the radical R^{15};

R^{12b} is amino, di-$((C_1-C_{18})$-alkyl)-amino or R^{12a}-NH;

R^{13} is hydrogen, (C_1-C_6)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, (C_3-C_8)-cycloalkyl or (C_3-C_8)-cycloalkyl-(C_1-C_8)-alkyl;

R^{15} is R^{16}-(C_1-C_6)-alkyl or R^{16};

R^{16} is a 6- to 24-membered, bicyclic or tricyclic radical which is saturated or partially unsaturated and which can also contain one, two, three or four identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur and which can also be substituted by one or more identical or different substituents from the group consisting of (C_1-C_4)-alkyl and oxo;

R^{21} is hydrogen, (C_1-C_8)-alkyl, hydroxy-(C_1-C_8)-alkyl, (C_2-C_8)-alkenyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl or heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical, where alkyl radicals can also be monosubstituted or polysubstituted by fluorine and the radicals R^{21} can be identical or different if they occur two or more times;

R^{22} is (C_1-C_8)-alkyl, hydroxy-(C_1-C_8)-alkyl, (C_2-C_8)-alkenyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl or heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical, where alkyl radicals can be monosubstituted or polysubstituted by fluorine and the radicals R^{22} can be identical or different if they occur two or more times;

R^{28} is one of the radicals R^{21}-, $R^{21}N(R^{21})$-, $R^{21}C(O)$-, $R^{22}O$-C(O)-, $R^{21}N(R^{21})$-C(O)- or $R^{21}N(R^{21})$-C(=N(R^{21}))-;

R^{29} is one of the radicals R^{22}-, $R^{21}N(R^{21})$-, $R^{21}C(O)$-, $R^{22}O$-C(O)-, $R^{21}N(R^{21})$-C(O)- or $R^{21}N(R^{21})$-C(=N(R^{21}))-;

Het is the radical of a 5- to 10-membered, monocyclic or polycyclic heterocycle bonded via

a nitrogen atom, which can be aromatic or partially unsaturated or saturated and which can contain one, two, three or four identical or different additional ring heteroatoms from the group consisting of oxygen, nitrogen and sulfur and which can be optionally substituted on carbon atoms and on additional ring nitrogen atoms, where there can be identical or different radicals R^h, R^hCO or R^hO-CO as substituents on additional ring nitrogen atoms and R^h is hydrogen, (C_1-C_8)-alkyl, (C_3-C_8)-cycloalkyl, (C_3-C_8)-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl or (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical;

b, c, d and f independently of one another can be 0 or 1, but cannot all simultaneously be 0;

e, g and h independently of one another are 0, 1, 2, 3, 4, 5 or 6;

in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts; and one or more pharmaceutically inocuous carriers and/or additives.

22. A pharmaceutical preparation as claimed in claim 21 wherein the effective amount is an amount effective for the suppression of inflammation.

23. A pharmaceutical preparation as claimed in claim 21 wherein the effective amount is an amount effective for the suppression of leucocyte migration and/or adhesion.

24. A pharmaceutical preparation as claimed in claim 21 wherein the effective amount is an amount effective for treatment or prevention of a disease selected from the group consisting of rheumatoid arthritis, inflammatory bowel disease, systemic lupus erythematosus, inflammatory disorders of the central nervous system, asthma, allergies, cardiovascular disorders, arteriosclerosis, restenoses, diabetes, damage to organ transplants, tumor growth tumor metastasis, and malaria.

25. A method for the suppression of inflammation comprising administering to a subject in need thereof an effective amount of the preparation as claimed in claim 21.

26. A method for antagonizing VLA-4 comprising administering to a subject in need thereof an effective amount of the preparation as claimed in claim 21.

27. A method for inhibiting leucocyte adhesion and/or leucocyte migration comprising administering to a subject in need thereof an effective amount of the preparation as claimed in claim 21.

28. A method for treatment or prevention of a disease or disorder selected from the group consisting of rheumatoid arthritis, inflammatory bowel disease, systemic lupus erythematosus, inflammatory disorders of the central nervous system, asthma, allergies, cardiovascular disorders, arteriosclerosis, restenoses, diabetes, damage to organ transplants, tumor growth, tumor metastasis, and malaria comprising administering to a subject in need thereof an effective amount of the preparation as claimed in claim 21.

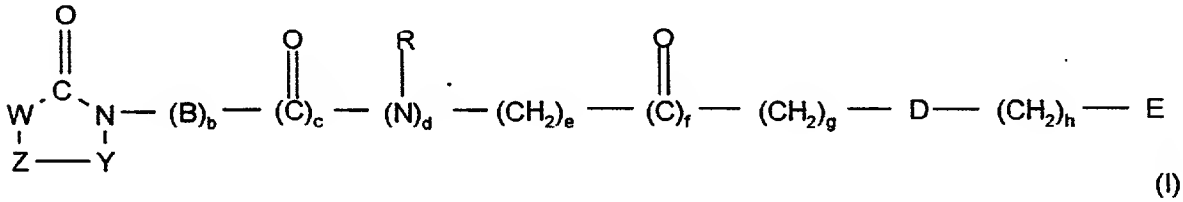
29. The preparation of claim 21 wherein the effective amount is a VLA-4-antagonizing effective amount.

30. The pharmaceutical prepation as claimed in claim 29 wherein the VLA-4-antagonizing effective amount is an amount effective for the suppression of inflammation.

31. The pharmaceutical preparation as claimed in claim 29 wherein the VLA-4-antagonizing effective amount is an amount effective for suppression of leucocyte adhesion and/or migration.

32. The pharmaceutical preparation as claimed in claim 29 wherein the VLA-4-antagonizing effective amount is an amount effective for treating or preventing a disease or disorder selected from the group consisting of rheumatoid arthritis, inflammatory bowel disease, systemic lupus erythematosus, inflammatory disorders of the central nervous system, asthma, allergies, cardiovascular disorders, arteriosclerosis, restenoses, diabetes, damage to organ transplants, tumor growth, tumor metastasis, and malaria.

33. A kit comprising a VLA-4-antagonizing effective amount of one or more compounds of the formula 1b



(I)

in which

W is R^1-A-C(R^{13}) or R^1-A-CH=C;

Y is a carbonyl, thiocarbonyl or methylene group;

Z is N(R^0), oxygen, sulfur or a methylene group;

A is a bivalent radical from the group consisting of (C_1-C_6)-alkylene, (C_3-C_{12})-cycloalkylene, (C_1-C_6)-alkylene-(C_3-C_{12})-cycloalkyl, phenylene, phenylene-(C_1-C_6)-alkyl, (C_1-C_6)-alkylenephenyl, (C_1-C_6)-alkylenephenyl-(C_1-C_6)-alkyl, phenylene-(C_2-C_6)-alkenyl or a bivalent radical of a 5- or 6-membered saturated or unsaturated ring which can contain 1 or 2 nitrogen atoms and can be mono- or disubstituted by (C_1-C_6)-alkyl or doubly bonded oxygen or sulfur, or is a direct bond;

B is a bivalent radical from the group consisting of (C_1-C_6)-alkylene, (C_2-C_6)-alkenylene, phenylene, phenylene-(C_1-C_3)-alkyl, (C_1-C_3)-alkylenephenyl, where the bivalent (C_1-C_6)-alkylene radical can be unsubstituted or substituted by a radical from the group consisting of (C_1-C_8)-alkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, (C_3-C_{10})-cycloalkyl, (C_3-C_{10})-cycloalkyl-(C_1-C_6)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-

$(C_1$-$C_6)$-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl and heteroaryl-$(C_1$-$C_6)$-alkyl optionally substituted in the heteroaryl radical;

D is $C(R^2)(R^3)$, $N(R^3)$ or $CH=C(R^3)$;

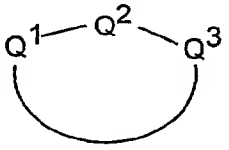
E is tetrazolyl, $(R^8O)_2P(O)$, $HOS(O)_2$, $R^9NHS(O)_2$ or $R^{10}CO$;

R is hydrogen, $(C_1$-$C_8)$-alkyl, $(C_3$-$C_{12})$-cycloalkyl, $(C_3$-$C_{12})$-cycloalkyl-$(C_1$-$C_8)$-alkyl, optionally substituted $(C_6$-$C_{14})$-aryl, $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl and heteroaryl-$(C_1$-$C_8)$-alkyl optionally substituted in the heteroaryl radical, where alkyl radicals can be mono- or polysubstituted by fluorine;

R^0 is hydrogen, $(C_1$-$C_8)$-alkyl, $(C_3$-$C_{12})$-cycloalkyl, $(C_3$-$C_{12})$-cycloalkyl-$(C_1$-$C_8)$-alkyl, $(C_6$-$C_{12})$-bicycloalkyl, $(C_6$-$C_{12})$-bicycloalkyl-$(C_1$-$C_8)$-alkyl, $(C_6$-$C_{12})$-tricycloalkyl, $(C_6$-$C_{12})$-tricycloalkyl-$(C_1$-$C_8)$-alkyl, optionally substituted $(C_6$-$C_{14})$-aryl, $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl, heteroaryl-$(C_1$-$C_8)$-alkyl optionally substituted in the heteroaryl radical, CHO, $(C_1$-$C_8)$-alkyl-CO, $(C_3$-$C_{12})$-cycloalkyl-CO, $(C_3$-$C_{12})$-cycloalkyl-$(C_1$-$C_8)$-alkyl-CO, $(C_6$-$C_{12})$-bicycloalkyl-CO, $(C_6$-$C_{12})$-bicycloalkyl-$(C_1$-$C_8)$-alkyl-CO, $(C_6$-$C_{12})$-tricycloalkyl-CO, $(C_6$-$C_{12})$-tricycloalkyl-$(C_1$-$C_8)$-alkyl-CO, optionally substituted $(C_6$-$C_{14})$-aryl-CO, $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl-CO optionally substituted in the aryl radical, optionally substituted heteroaryl-CO, heteroaryl-$(C_1$-$C_8)$-alkyl-CO optionally substituted in the heteroaryl radical, $(C_1$-$C_8)$-alkyl-$S(O)_n$, $(C_3$-$C_{12})$-cycloalkyl-$S(O)_n$, $(C_3$-$C_{12})$-cycloalkyl-$(C_1$-$C_8)$-alkyl-$S(O)_n$, $(C_6$-$C_{12})$-bicycloalkyl-$S(O)_n$, $(C_6$-$C_{12})$-bicycloalkyl-$(C_1$-$C_8)$-alkyl-$S(O)_n$, $(C_6$-$C_{12})$-tricycloalkyl-$S(O)_n$, $(C_6$-$C_{12})$-tricycloalkyl-$(C_1$-$C_8)$-alkyl-$S(O)_n$, optionally substituted $(C_6$-$C_{14})$-aryl-$S(O)_n$, $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl-$S(O)_n$ optionally substituted in the aryl radical, optionally substituted heteroaryl-$S(O)_n$ or heteroaryl-$(C_1$-$C_8)$-alkyl-$S(O)_n$ optionally substituted in the heteroaryl radical, where n is 1 or 2;

R^1 is one of the radicals $-S-R^{21}$, $-S-S-R^{21}$, $-S(O)-R^{22}$, $-S(O)_2-R^{22}$, $-S-OR^{21}$, $-S(O)-OR^{21}$, $-S(O)_2-OR^{21}$, $-S-N(R^{21})-R^{28}$, $-S(O)-N(R^{21})-R^{28}$, $-S(O)_2-N(R^{21})-R^{28}$, $-S-C(O)-R^{21}$, $-S-C(O)-OR^{22}$, $-S-C(S)-SR^{22}$, $-S-C(O)-N(R^{21})-R^{28}$, $-S-C(S)-N(R^{21})-R^{28}$, $-O-C(O)-R^{21}$, $-O-C(S)-R^{21}$, $-O-C(O)-OR^{22}$, $-O-C(O)-N(R^{21})-R^{28}$, $-O-C(S)-N(R^{21})-R^{28}$, $-O-S(O)_2-OR^{21}$, $-O-S(O)-OR^{21}$, $-O-S(O)_2-N(R^{21})-R^{28}$, $-O-S(O)-N(R^{21})-R^{28}$, $-O-S(O)_2-R^{22}$, $-O-S(O)-R^{22}$, $-O-P(O)(OR^{21})_2$, $-O-P(O)(OR^{21})-N(R^{21})-R^{28}$, $-O-P(O)(N(R^{21})-R^{28})_2$, $-N(R^{29})-C(O)-OR^{22}$, $-N(R^{28})-C(O)-SR^{22}$, $-N(R^{28})-C(S)-OR^{22}$, $-N(R^{28})-C(S)-SR^{22}$, $-N(R^{28})-C(S)-R^{21}$, $-N(R^{28})-C(O)-N(R^{21})-R^{28}$, $-N(R^{28})-C(S)-N(R^{21})-R^{28}$, $-N(R^{28})-S(O)_2-R^{22}$, $-N(R^{28})-S(O)-R^{22}$, $-N(R^{28})-S(O)_2-OR^{21}$, $-N(R^{28})-S(O)-OR^{21}$, $-N(R^{28})-S(O)_2-N(R^{21})-R^{28}$, $-N(R^{28})-S(O)-N(R^{21})-R^{28}$, $-N(R^{28})-P(O)(OR^{21})_2$, $-N(R^{28})-P(O)(OR^{21})-N(R^{21})-R^{28}$, $-N(R^{28})-P(O)(N(R^{21})-R^{28})_2$, $-N(R^{28})-P(O)(R^{22})-OR^{21}$, $-N(R^{28})-P(O)(R^{22})-N(R^{21})-R^{28}$, $-N(R^{28})-P(O)(R^{22})_2$, $-P(O)(OR^{21})_2$, $-P(O)(OR^{21})-N(R^{21})-R^{28}$, $-P(O)(N(R^{21})-R^{28})_2$, $-P(O)(R^{22})-OR^{21}$, $-P(O)(R^{22})-N(R^{21})-R^{28}$, $-P(O)(R^{22})_2$,

$-C(S)-R^{21}$, $-C(S)-SR^{21}$, $-C(S)-N(R^{21})-R^{28}$,
cyano, halogen, nitro or methylenedioxy or the radical of an optionally substituted, 5- to 14-membered, mono- or polycyclic, saturated or unsaturated heterocyclic ring of the formula



in which
Q^1 is $-C(R^{21})_2-$, $=C(R^{21})-$, $-N(R^{28})-$, -O- or -S-;
Q^2 is -S(O)- or $-S(O)_2-$;
Q^3 is $-C(R^{21})_2-$, $=C(R^{21})-$, $-N(R^{28})-$, -O-, -S-, $-C(R^{21})(-)-$ or $-N(-)-$,
where the heterocyclic ring can be bonded to the group A via the free bond in the groups $-C(R^{21})(-)-$ or $-N(-)-$ representing Q^3 or via any other desired ring carbon atom and where, if the heterocyclic ring is bonded to a ring system contained in the group A, the heterocyclic ring can also be fused via two adjacent atoms to the ring system in the group A;

R^2 is hydrogen, (C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical or (C_3-C_8)-cycloalkyl;

R^3 is hydrogen, (C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, (C_3-C_8)-cycloalkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, (C_2-C_8)-alkenylcarbonyl, (C_2-C_8)-alkynylcarbonyl, pyridyl, $R^{11}NH$, R^4CO, $COOR^4$, $CON(CH_3)R^4$, $CONHR^4$, $CSNHR^4$, $COOR^{15}$, $CON(CH_3)R^{15}$ or $CONHR^{15}$;

R^4 is hydrogen or (C_1-C_{28})-alkyl which can optionally be mono- or polysubstituted by identical or different radicals from the group consisting of hydroxyl, hydroxycarbonyl, aminocarbonyl, mono- or di-$((C_1-C_{18})$-alkyl)aminocarbonyl, amino-(C_2-C_{18})-alkylaminocarbonyl, amino-(C_1-C_3)-alkylphenyl-(C_1-C_3)-alkylaminocarbonyl, (C_1-C_{18})-alkylcarbonylamino-(C_1-C_3)-alkylphenyl-(C_1-C_3)-alkylaminocarbonyl, (C_1-C_{18})-alkylcarbonylamino-(C_2-C_{18})-alkylaminocarbonyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkoxycarbonyl which can also be substituted in the aryl radical, amino, mercapto, (C_1-C_{18})-alkoxy, (C_1-C_{18})-alkoxycarbonyl, Het-CO, optionally substituted (C_3-C_8)-cycloalkyl, $HOS(O)_2-(C_1-C_3)$-alkyl, $R^9NHS(O)_2-(C_1-C_3)$-alkyl, $(R^8O)_2P(O)-(C_1-C_3)$-alkyl, tetrazolyl-(C_1-C_3)-alkyl, halogen, nitro, trifluoromethyl or the radical R^5;

R^5 is optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, a mono- or bicyclic 5- to 12-membered heterocyclic ring which can be aromatic, partially hydrogenated or completely hydrogenated and which can contain one, two or three identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur, a radical R^6 or a radical R^6CO-, where the aryl radical and, independently thereof, the heterocyclic radical can be mono- or polysubstituted by identical or different radicals from the group consisting of (C_1-C_{18})-alkyl, (C_1-C_{18})-alkoxy, halogen, nitro, amino and trifluoromethyl;

R^6 is R^7R^8N, R^7O or R^7S or an amino acid side chain, a natural or unnatural amino acid, imino acid, optionally N-(C_1-C_8)-alkylated or N-((C_6-C_{14})-aryl-(C_1-C_8)-alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or reduced in the peptide bond to -NH-CH_2-, and their esters and amides, where hydrogen or hydroxymethyl can optionally stand in place of of free functional groups and/or where free functional groups can be protected by protective groups customary in peptide chemistry;

R^7 is hydrogen, (C_1-C_{18})-alkyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl, (C_1-C_{18})-alkylcarbonyl, (C_1-C_{18})-alkoxycarbonyl, (C_6-C_{14})-arylcarbonyl, (C_6-C_{14})-aryl-(C_1-C_8)-alkylcarbonyl or (C_6-C_{14})-aryl-(C_1-C_{18})-alkyloxycarbonyl, where the alkyl groups can optionally be substituted by an amino group and/or where the aryl radicals can be mono- or polysubstituted by identical or different radicals from the group consisting of (C_1-C_8)-alkyl, (C_1-C_8)-alkoxy, halogen, nitro, amino and trifluoromethyl, or is a natural or unnatural amino acid, imino acid, optionally N-(C_1-C_8)-alkylated or N-((C_6-C_{14})-aryl-(C_1-C_8)-alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or reduced in the peptide bond to -NH-CH_2-;

R^8 is hydrogen, (C_1-C_{18})-alkyl, optionally substituted (C_6-C_{14})-aryl or (C_6-C_{14})-aryl-(C_1-C_8)-alkyl which can also be substituted in the aryl radical;

R^9 is hydrogen, aminocarbonyl, (C_1-C_{18})-alkylaminocarbonyl, (C_3-C_8)-cycloalkylaminocarbonyl, optionally substituted (C_6-C_{14})-arylaminocarbonyl, (C_1-C_{18})-alkyl, optionally substituted (C_6-C_{14})-aryl or (C_3-C_8)-cycloalkyl;

R^{10} is hydroxyl, (C_1-C_{18})-alkoxy, (C_6-C_{14})-aryl-(C_1-C_8)-alkoxy which can also be substituted in the aryl radical, optionally substituted (C_6-C_{14})-aryloxy, amino or mono- or di-((C_1-C_{18})-alkyl)amino;

R^{11} is hydrogen, R^{12a}, R^{12a}-CO, H-CO, R^{12a}-O-CO, R^{12b}-CO, R^{12b}-CS, R^{12a}-$S(O)_2$ or R^{12b}-$S(O)_2$;

R^{12a} is (C_1-C_{18})-alkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, (C_3-C_{12})-cycloalkyl, (C_3-C_{12})-cycloalkyl-(C_1-C_8)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl, heteroaryl-(C_1-C_8)-alkyl optionally substituted in the heteroaryl radical or the radical R^{15};

R^{12b} is amino, di-((C_1-C_{18})-alkyl)amino or R^{12a}-NH;

R^{13} is hydrogen, (C_1-C_6)-alkyl, optionally substituted (C_6-C_{14})-aryl, (C_6-C_{14})-aryl-(C_1-C_8)-alkyl optionally substituted in the aryl radical, (C_3-C_8)-cycloalkyl or (C_3-C_8)-cycloalkyl-(C_1-C_8)-alkyl;

R^{15} is R^{16}-(C_1-C_6)-alkyl or R^{16};

R^{16} is a 6- to 24-membered bicyclic or tricyclic radical which is saturated or partially unsaturated and which can also contain one, two, three or four identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur and which can also be substituted by one or more identical or different substituents from the group consisting of (C_1-C_4)-alkyl and oxo;

R^{21} is hydrogen, (C_1-C_8)-alkyl, hydroxy-(C_1-C_8)-alkyl, (C_2-C_8)-alkenyl, (C_3-C_{12})-cycloalkyl,

$(C_3$-$C_{12})$-cycloalkyl-$(C_1$-$C_8)$-alkyl, optionally substituted $(C_6$-$C_{14})$-aryl, $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl or heteroaryl-$(C_1$-$C_8)$-alkyl optionally substituted in the heteroaryl radical, where alkyl radicals can also be monosubstituted or polysubstituted by fluorine and the radicals R^{21} can be identical or different if they occur two or more times;

R^{22} is $(C_1$-$C_8)$-alkyl, hydroxy-$(C_1$-$C_8)$-alkyl, $(C_2$-$C_8)$-alkenyl, $(C_3$-$C_{12})$-cycloalkyl, $(C_3$-$C_{12})$-cycloalkyl-$(C_1$-$C_8)$-alkyl, optionally substituted $(C_6$-$C_{14})$-aryl, $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl or heteroaryl-$(C_1$-$C_8)$-alkyl optionally substituted in the heteroaryl radical, where alkyl radicals can be monosubstituted or polysubstituted by fluorine and the radicals R^{22} can be identical or different if they occur two or more times;

R^{28} is one of the radicals R^{21}-, $R^{21}N(R^{21})$-, $R^{21}C(O)$-, $R^{22}O$-C(O)-, $R^{21}N(R^{21})$-C(O)- or $R^{21}N(R^{21})$-C(=N(R^{21}))-;

R^{29} is one of the radicals R^{22}-, $R^{21}N(R^{21})$-, $R^{21}C(O)$-, $R^{22}O$-C(O)-, $R^{21}N(R^{21})$-C(O)- or $R^{21}N(R^{21})$-C(=N(R^{21}))-;

Het is the radical of a 5- to 10-membered, monocyclic or polycyclic heterocycle bonded via a nitrogen atom, which can be aromatic or partially unsaturated or saturated and which can contain one, two, three or four identical or different additional ring heteroatoms from the group consisting of oxygen, nitrogen and sulfur and which can be optionally substituted on carbon atoms and on additional ring nitrogen atoms, where there can be identical or different radicals R^h, R^hCO or R^hO-CO as substituents on additional ring nitrogen atoms and R^h is hydrogen, $(C_1$-$C_8)$-alkyl, $(C_3$-$C_8)$-cycloalkyl, $(C_3$-$C_8)$-cycloalkyl-$(C_1$-$C_8)$-alkyl, optionally substituted $(C_6$-$C_{14})$-aryl or $(C_6$-$C_{14})$-aryl-$(C_1$-$C_8)$-alkyl optionally substituted in the aryl radical;

b, c, d and f independently of one another are 0 or 1, but cannot all simultaneously be 0;

e, g and h independently of one another are 0, 1, 2, 3, 4, 5 or 6;

in all its stereoisomeric forms and mixtures thereof in any ratio, and/or its physiologically tolerable salts;

instructions for use; and

one or more pharmaceutically inocuous carriers and/or additives.

34. The kit as claimed in claim 33 wherein the VLA-4-antagonizing effective amount is an amount effective for the suppression of inflammation.

35. The kit as claimed in claim 33 wherein the VLA-4-antagonizing effective amount is an amount effective for suppression of leucocyte adhesion and/or migration.

36. The kit as claimed in claim 33 wherein the VLA-4-antagonizing effective amount is an amount effective for treating or preventing a disease or disorder selected from the group consisting of rheumatoid arthritis, inflammatory bowel disease, systemic lupus erythematosus, inflammatory disorders of the central nervous system, asthma, allergies,

cardiovascular disorders, arteriosclerosis, restenoses, diabetes, damage to organ transplants, tumor growth, tumor metastasis, and malaria.